

California M E D I C I N E

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION
© 1948, by the California Medical Association

VOL. 69

JULY, 1948

No. 1

Experimental Portacaval Anastomosis

RICHARD E. GARDNER, M.D., FRANK H. LEEDS, M.D., and
NORMAN E. FREEMAN, M.D., *San Francisco*

PORTAL hypertension, with its severe sequelae, has stimulated the ingenuity of surgeons for many years. The experiments of Nikolai V. Eck in 1877 established the foundation for the many portacaval shunting procedures that have been attempted. Direct portacaval suture anastomosis was done in France and Germany during the period from 1910 to 1912, but with poor results. Renal shutdown was the most frequent cause of death, and this was thought to be due to blockage of the inferior vena cava for too long a period. In other shunting procedures attempts were made to utilize small branches of the mesenteric veins and smaller venous channels such as the ovarian and spermatic veins. These suture anastomoses were not successful because the small vessels used did not allow sufficient flow of blood, thrombosis occurred and supportive measures that are available at the present time were lacking.

Many other procedures have been done in the hope of eliminating the hazards that result from portal hypertension. Direct cauterization of the varices, omentopexy, and attempted ligation of the small branches of the coronary vein have not met with notable success. Resection of the upper end of the stomach and lower portion of the esophagus for esophageal varices has been done with more successful results.⁷ Splenectomy in cases of Banti's syndrome has resulted in occasional cures, but only when the obstruction of the splenic vein has been distal to the entrance of the coronary vein. The success in splenectomy is so variable that Blakemore¹ has urged surgeons to spare the spleen in those cases where the obstruction is proximal to the coronary vein, so that, if necessary, the patient may have the benefit of a splenorenal anastomosis.

The trying and tedious aspects of a portacaval anastomosis, as described by Whipple,⁹ have been the stimulus for our experiments. We felt that if some of the technical difficulties could be overcome the

operation would be considerably less hazardous. Adequate exposure appeared to be an important part of this procedure. One of us had used a transverse incision in a retroperitoneal approach to the abdominal aorta⁴ which provided excellent exposure, and we felt a modification of a transverse approach would be desirable in a portacaval anastomosis.

Blakemore and Lord² have stated: "There is full agreement that the ideal technique in blood vessel anastomosis embraces intima-to-intima coaptation without the interposition of a foreign body in contact with the flowing blood. It is conceded that suture anastomosis, when done with meticulous care, may closely approximate the above ideal." It has recently been shown experimentally by Johns⁵ that suture anastomosis results in fewer failures than the non-suture technique. Blakemore and Lord felt that suture anastomosis was impractical for portacaval shunts because of difficulties of exposure and because complete occlusion of the vena cava for the length of time required for suture technique might cause serious kidney damage. It has since been stressed by Welch⁸ and Blalock³ that complete occlusion of the inferior vena cava is not necessary. The experiments here reported present a lateral approach to the portal vein and inferior vena cava and the use of a special clamp which permits occlusion of only a portion of the latter vein during the suture anastomosis.

LABORATORY EXPERIMENTS

The present experiments were concerned with anastomosis of the end of the portal vein to the side of the inferior vena cava. Operations were carried out on 15 mongrel dogs weighing between 5 and 22 kilograms. Intravenous nembutal supplemented by ether was used for anesthesia. All dogs were intubated for the use of positive pressure anesthesia during the time that the chest was open. In the first six operations a right transverse subcostal incision was used which extended from the edge of the rectus muscle to the lumbodorsal muscle group and passed

From the Laboratories of Experimental Surgery, Division of Surgery, University of California Medical School, San Francisco 22, California. This work was supported in part by a grant from the Life Insurance Medical Research Fund.

California M E D I C I N E

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION
450 SUTTER, SAN FRANCISCO 8 PHONE DOUGLAS 2-0062

Editor, DWIGHT L. WILBUR, M.D.

Assistant to the Editor, ROBERT F. EDWARDS

Editorial Executive Committee

LAMBERT B. COBLENTZ, M.D., San Francisco

ALBERT J. SCHOLL, M.D., Los Angeles

H. J. TEMPLETON, M.D., Oakland

For Information on Preparation of Manuscript, See Advertising Page 2

EDITORIALS

The C.M.A. Expands

Announcement by the Council of the California Medical Association at the 1948 Annual Session that the opening of a Southern California office had been approved was cause for satisfaction to many Association members in the southern counties. Quite naturally, some of them had previously felt that the San Francisco headquarters were a long way off, in miles if not in spirit.

It is now possible to announce the opening of a Southern California office in the Subway Terminal Building, Los Angeles. Interestingly enough, the room number is 606. This office serves not only as a Southern California headquarters but is available for the use of Association employees and officers, as well as the Cancer Commission and other committees of the Association.

Coincident with the Council's decision to open this office comes the announcement that Mr. Ed Clancy has been employed as Field Secretary. Mr. Clancy is a former newspaper publisher in Ventura County and is well versed and experienced in the fields of public relations and legislation. For the past three years he has served the Association through employment by public relations counsel and has proved his value to the Association in numerous counties where

he managed the "Voluntary Health Insurance Weeks" which were a major part of the overall public relations program. More recently he has gone into several counties, on request, to aid in establishing proper public relations for county societies which were faced with unusual problems.

The opening of a Southern California office and the employment of a field secretary are indicative of the expanding activities of the Association. The permanent headquarters staff now numbers nine, with a part-time director of postgraduate activities and a medical director of the Cancer Commission in addition. The addition of a field secretary brings the Association's total staff to twelve members and places the organization in a better position to serve its component county societies and their members. The growing problems of organized medicine, particularly in fields apart from scientific medicine, demand that an adequate staff organization be maintained, and it is obvious that the present personnel, both in numbers and in varieties of skills, is in a better position to do the job that needs doing.

The county societies and their members are cordially invited to avail themselves of the Association's services.

CALIFORNIA MEDICAL ASSOCIATION

E. VINCENT ASKEY, M.D.....	President	EDWIN L. BRUCK, M.D.....	Council Chairman
R. STANLEY KNEESHAW.....	President-Elect	L. HENRY GARLAND, M.D.....	Secretary-Treasurer
LEWIS A. ALESEN, M.D.....	Speaker	SIDNEY J. SHIPMAN, M.D.....	Chairman, Executive Committee
DONALD A. CHARNOCK, M.D.....	Vice-Speaker	DWIGHT L. WILBUR, M.D.....	Editor
JOHN HUNTON.....	Executive Secretary		

NOTICES AND REPORTS

Imperial County Postgraduate Seminar

The C.M.A. Postgraduate Committee reports on the Imperial County Seminar held at El Centro, May 20 and 21:

MAY 20

8:00 p.m.—Cancer of the Cervix and the Fundus Uteri—William E. Costolow, M.D., Los Angeles.
General Aspects of Cancer—Lyell C. Kinney, M.D., Chairman, C.M.A., Cancer Commission.

MAY 21

10:00 a.m.—Clinical Conference: (1) Rheumatic Fever; (2) Toxemia of Pregnancy.

AFTERNOON PROGRAM

Common Pediatric Problems Encountered in General Practice—Sam J. McClendon, M.D., San Diego.
Modern Management of Common Obstetrical Problems—Ralph Hoffman, M.D., San Diego.
Pitfalls in Gynecological Surgery—Charles Isham, M.D., San Diego.
Panel Presentation—Office Gynecology, Pediatrics and Obstetrics.
Discussion Period.
Motion Picture: Normal Breech Delivery.

Sixteen members of the Imperial Medical Association attended the seminars. This is approximately 60 per cent of the membership.

The program provided an excellent summary of the recognized and accepted advances in the presented subjects and it was agreed that the committee and the physicians attending the seminars were particularly fortunate in obtaining a fine faculty. Dr. Costolow emphasized the importance of early diagnosis of cancer of the cervix and endometrium. The responsibility for this, he said, rests not only with the patient but also with the family physician whose attention to unusual symptoms, with immediate and definite diagnosis by proper physical examination and biopsy, will result in treatment of a larger percentage of cases in early stages where an 85 per cent cure rate can be expected. Dr. Kinney's discussion dealt with the increasing incidence of cancer coincidental with the extension of the life span of larger proportions of the population into the years of higher incidence of cancer. Fifty per cent of all cancer may be diagnosed by the family physician, Dr. Kinney said, and the other 50 per cent must be

promptly diagnosed with the help of consultation and special examinations.

Dr. McClendon pointed out that in California there are only 335 pediatricians to serve an expanding population of approximately 10,000,000 people. The majority of pediatric care, about 75 per cent, particularly in non-metropolitan areas must therefore be supplied by physicians in general practice, he said. He discussed pediatric problems most likely to confront general practitioners. Dr. Hoffman's paper on obstetrics presented many very vital advances in this field particularly in prenatal care, in anesthesia, and in solution of operative problems. Dr. Isham outlined the most important and frequently occurring gynecological diseases and discussed the present treatment of them through uses of chemotherapy, antibiotics and surgery.

Physicians who attended the seminars requested that others be offered in the area in the fall months.

Executive Committee Minutes

Tentative Drafts: Minutes of the 208th and 209th Meeting of the California Medical Association Executive Committee.

The 208th meeting was called to order by Dr. Sidney J. Shipman, acting chairman, at 10 a.m., in Room 220, St. Francis Hotel, San Francisco, Wednesday, April 14, 1948.

1. Roll Call:

Present were Doctors E. V. Askey, R. Stanley Kneeshaw, Lewis A. Alesen, Sidney J. Shipman, L. Henry Garland (ex officio), members of the Executive Committee, Dr. Dwight H. Murray, chairman of the Committee on Public Policy and Legislation, Mr. Ben H. Read, executive secretary of the Public Health League of California, Mr. Howard Hassard, legal counsel, Mr. John Hunton, executive secretary, and Mr. Ed Clancy of public relations counsel.

2. Hospital District in Porterville:

Mr. Read discussed the situation in Porterville, where a hospital district is in process of formation and pressure is being put upon local officials to open